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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,618	03/04/2002	Sashikanth Chandrasekaran	50277-1725	8221

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EXAMINER

DODDS, HAROLD E

ART UNIT PAPER NUMBER

2168

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/091,618	Applicant(s) CHANDRASEKARAN ET AL.	
	Examiner Harold E. Dodds, Jr.	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 49-71 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6-11, 13-23, 49, 54-59 and 61-71 is/are rejected.
- 7) ☒ Claim(s) 2-5, 12, 50-53 and 60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/9/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 10, 18, 20-23, 49, 58, 66, and 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al (U.S. Patent No 5,924,096) and Bereznyi et al. (U.S. Patent No. 6,453,404).

3. Draper renders obvious independent claims 1 and 49 by the following:
“...modifying the data item in a first node of said multiple caches...” at col. 7, lines 46-48, col. 4, lines 1-3, and col. 8, lines 11-14.
“...to create a modified data item...” at col. 6, lines 64-64 and col. 7, lines 1-3.
“...sending the modified data item from said first node to a second node of said multiple

caches..." at col. 9, lines 29-31, col. 7, lines 46-48, col. 4, lines 1-3, and col. 8, lines 11-14.

"...the modified data item from said first node..." at col. 7, lines 46-48 and col. 4, lines 1-3.

"...to persistent storage..." at col. 4, lines 56-58.

"...after said modified data item has been sent from said first node to said second node..." at col. 7, lines 46-48, col. 9, lines 29-31, and col. 4, lines 1-3.

"...said first node sending a request..." at col. 4, lines 1-3 and col. 8, lines 46-49.

"...to a master of said data item..." at col. 8, lines 27-29 and col. 21, lines 22-25.

"...for writing said data item to persistent storage..." at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 56-58.

"...and in response to said request..." at col. 7, lines 60-61.

"...said master coordinating with said multiple caches..." at col. 13, lines 4-51.

"...to cause said data item to be written to persistent storage..." at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 56-58.

Draper does not explicitly teach the use of temporary storage.

4. However, Bereznai explicitly teaches the use of temporary storage as follows:

"...without durably storing..." at col. 1, lines 12-13.

It would have been obvious to one of ordinary skill at the time of the invention to combine Bereznai with Draper to use caches for temporary storage in order to use standard hardware to avoid the need to download the data from a data source a

second time and gain acceptance of the system. Draper and Bereznyi teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of queries, the use of nodes, and the use of objects. For independent claims 1 and 49, the term “manage” is used to suggest the term “coordinate”.

5. As per claims 10 and 58, the “...step of said first node sending a request to a master of said data item...,” is taught by Draper at col. 4, lines 1-3, col. 8, lines 46-49, and col. 8 lines 3-10, the “...for writing said data item to persistent storage...,” is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48, the “...includes the first node sending to said master...,” is taught by Draper at col. 4, lines 1-3 and col. 9, lines 60-62, the “...single message...,” is taught by Bereznyi at col. 31, lines 12-14, that requests writing a plurality of data items to persistent storage...,” is taught by Draper at col. 8, lines 46-49, col. 6, lines 64-67, and col. 7, lines 1-3, and the “...wherein said plurality of data items includes said data item...,” is taught by Draper at col. 6, lines 64-67 and col. 7, lines 1-3.

6. As per claims 18 and 66, the “...determining whether a version of said data item...,” is taught by Draper at col. 5, lines 24-25, the “...that is at least as recent as said modified version...” is taught by Draper at col. 5, lines 24-28 and col. 7, lines 46-48,

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the "...has already been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48,

the "...and if a version of said data item..." is taught by Draper at col. 5, lines 24-25,

the "...that is at least as recent as said modified version..." is taught by Draper at col. 5, lines 24-28 and col. 7, lines 46-48,

the "...has already been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48,

the "...then sending a write-notification message..." is taught by Bereznyi at col. 31, lines 2-3 and col. 31, lines 12-14,

the "...from said master..." is taught by Draper at col. 9, lines 60-62,

the "...to notify said first node..." is taught by Bereznyi at col. 4, lines 20-24 and col. 4, lines 55-60,

the "...that a version of said data item..." is taught by Draper at col. 5, lines 24-25,

the "...that is at least as recent as said modified version..." is taught by Draper at col. 5, lines 24-28 and col. 7, lines 46-48,

and the "...has already been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48.

7. As per claims 20 and 68, the "...selecting a particular node of said multiple caches..." is taught by Draper at col. 5, lines 19-20, col. 4, lines 1-3, and col. 8, lines 11-14,

the "...that has a particular version of said data item..." is taught by Draper at col. 5, lines 24-25,

the "...wherein said particular version is at least as recent...", is taught by Draper at col. 5, lines 24-28,

the "...as the modified data item in said first node...", is taught by is taught by Draper at col. 7, lines 46-48 and col. 9, lines 1-3,

the "...and causing said particular version of said data item...", is taught by Draper at col. 5, lines 24-25,

and the "...to be written from said particular node to persistent storage...", is taught by Draper at col. 6, lines 64-37, col. 7, lines 1-3, col. 4, lines 1-3, and col. 4, lines 46-48.

8. As per claims 21 and 69, the "...selecting the node of said multiple caches...", is taught by Draper at col. 5, lines 24-25, col. 4, lines 1-3, and col. 8, lines 14-17

and the "...that has a most recently modified version of said data item...", is taught by Draper at col. 5, lines 24-28 and col. 7, lines 46-48.

9. As per claims 22 and 70, the "...step of the master...", is taught by Draper at col. 8, lines 3-5,

informing the first node...", is taught by Berezhnyi at col. 4, lines 20-24 and col. 4, lines 55-60,

the "...that said data item has been written to persistent storage...", is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48,

the "...in response to the master receiving confirmation...", is taught by Draper at col. 7, lines 60-61 and col. 9, lines 26-28,

and the "...that said particular version of said data item has been written to persistent storage..." is taught by Draper at col. 5, lines 24-25, col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48.

10. As per claims 23 and 71, the "...step of the master..." is taught by Draper at col. 8, lines 3-5,
the "...informing a set of caches..." is taught by Bereznyi at col. 4, lines 20-24 and col. 31, lines 19-21,
the "...that said data item has been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48,
the "...in response to the master receiving confirmation..." is taught by Draper at col. 7, lines 60-61 and col. 9, lines 26-28,
the "...that said particular version of said data item has been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48,
the "...wherein said set of caches includes caches..." is taught by Bereznyi at col. 31, lines 19-21,
the "...other than said particular node..." is taught by Draper at col. 4, lines 1-3,
the "...that contain modified versions of said data item..." is taught by Draper at col. 7, lines 46-48 and col. 5, lines 24-25,
and the "...that are not more recent than said particular version..." is taught by Draper at col. 7, lines 46-48 and col. 5, lines 24-28.

11. Claims 6-9 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper and Bereznyi as applied to the claims above, and further in view of Devarakonda et al. (U.S. Patent No. 5,659,682).

As per claims 6 and 54, the "...step of sending a request to a master is performed by sending the request..." is taught by Draper at col. 8, lines 46-48 and col. 8, lines 3-5, but the "...to a global lock manager..." is not taught by either Draper or Bereznyi.

However, Devarakonda teaches the use of global lock managers as follows:

"...Commonly, a global lock manager is provided to resolve lock requests among tasks running on different processors and to maintain queues of tasks awaiting access to particular lock entities..."

It would have been obvious to one of ordinary skill at the time of the invention to combine Devarakonda with Draper and Bereznyi to provide global lock managers in order to resolve lock requests among tasks running on different processors and to maintain queues of tasks awaiting access to particular lock entities. Draper, Bereznyi, and Devarakonda teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of nodes, and the use of objects, Draper and Devarakonda teach the modification of data, and Bereznyi and Devarakonda teach the use of applications, the use of locks, and the use of messages.

12. As per claims 7 and 55, the "...step of sending a request to a master is performed by sending the request..." is taught by Draper at col. 8, lines 46-48 and col. 8, lines 3-5,

the "...to a lock manager that is one of a plurality of lock managers..." is taught by Devarakonda at col. 3, lines 24-28,
and the "...within a distributed lock management system..." is taught by Devarakonda at col. 3, lines 20-23.

13. As per claims 8 and 56, the "...step of sending from the master..." is taught by Draper at col. 8, lines 46-48 and col. 8, lines 3-5,
the "...to interested nodes..." is taught by Draper at col. 1, lines 18-29,
the "...write-notification messages..." is taught by Bereznyi at col. 31, lines 2-3 and col. 31, lines 12-14,
the "...indicating that said data item has been written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48,
and the "...in response to said data item being written to persistent storage..." is taught by Draper at col. 7, lines 60-61, col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48.

For claims 8 and 50 the term "involved nodes" is used to suggest the term "interested nodes".

14. As per claims 9 and 57, the "...step of sending write-notification messages..." is taught by Bereznyi at col. 31, lines 2-3 and col. 31, lines 12-14,
the "...includes the master sending to at least one interested node..." is taught by Draper at col. 8, lines 3-5, col. 8, lines 46-49, and col. 1, lines 18-29,
the "...single message..." is taught by Bereznyi at col. 31, lines 12-14,

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the "...that notifies said at least one interested node...", is taught by Bereznyi at col. 4, lines 20-24, col. 10, lines 3-5, and col. 4, lines 55-60, and the "...that a plurality of data items have been written to persistent storage...", is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48.

15. Claims 13 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper, Bereznyi, and Devarakonda as applied to claims 8, and 56 above respectively, and further in view of Maris et al. (U.S. Patent No. 6,032,188) and Matena (U.S. Patent No. 6,243,814).

As per claims 13 and 61, the "...immediately sending write-notification messages...", is taught by Bereznyi at col. 11, lines 14-16, col. 31, lines 2-3, and col. 31, lines 12-14, the "...to a first set of interested nodes...", is taught by Draper at col. 1, lines 18-29, the "...where said first set of interested nodes includes the interested nodes...", is taught by Draper at col. 1, lines 18-29, the "...that have requested said data item to be written to persistent storage...", is taught by Draper at col. 8, lines 46-49, col. 21, lines 22-25, col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 58-58, the "...to a second set of nodes...", is taught by Draper at col. 1, lines 18-29, the "...where said second set of nodes includes interested nodes...", is taught by Draper at col. 1, lines 18-29, but the "...and delaying the sending of write-notification messages..."

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and the "...that do not belong to said first set of interested nodes..." are not taught by either Draper, Bereznyi, or Devarakonda.

However, Mairs teaches the delaying of messages as follows:

"...This delay time period is the minimum time between transmitting data notification messages..." at col. 12, lines 25-26.

It would have been obvious to one of ordinary skill at the time of the invention to combine Mairs with Draper, Bereznyi, and Devarakonda to delay messages in order allow other data processing to occur and inform the user only after the processing of current data has taken place. Draper, Bereznyi, Devarakonda, and Mairs teach related applications. They teach the use of computers, the use of networks, and the use of nodes, Draper, Devarakonda, and Mairs teach the modification of data, and Bereznyi, Devarakonda, and Mairs teach the use of applications and the use of messages.

Mairs does not teach the exclusion of nodes from node sets.

However, Matena teaches the exclusion of nodes from node sets as follows:

"...FIG. 4 shows the general situation, taking into account the possibility that any of the nodes may have a different CK number than the rest, if that node has failed and been excluded from the membership set..." at col. 5, lines 37-41.

It would have been obvious to one of ordinary skill at the time of the invention to combine Matena with Draper, Bereznyi, Devarakonda, and Mairs to exclude nodes from node sets in order to only allow nodes in the set, which have the proper identification numbers. Draper, Bereznyi, Devarakonda, Mairs, and Matena teach related applications. They teach the use of computers, the use of networks, and the use of nodes, and Draper, Bereznyi, Devarakonda, and Matena teach the use of

databases and Bereznyi, Devarakonda, Mairs, and Matena teach the use of applications, and the use of messages.

16. Claims 14, 16, 62, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper, Bereznyi, and Devarakonda as applied to the claims above, and further in view of Maris et al. (U.S. Patent No. 6,032,188).

As per claims 14 and 62, the "...to at least one interested node..." is taught by Draper at col. 1, lines 18-29, but the "...delaying the sending of write-notification messages..." is not taught by either Draper, Bereznyi, or Devarakonda.

However, Mairs teaches the delaying of messages as follows:

"...This delay time period is the minimum time between transmitting data notification messages..." at col. 12, lines 25-26.

It would have been obvious to one of ordinary skill at the time of the invention to combine Mairs with Draper, Bereznyi, and Devarakonda to delay messages in order allow other data processing to occur and inform the user only after the processing of current data has taken place. Draper, Bereznyi, Devarakonda, and Mairs teach related applications. They teach the use of computers, the use of networks, and the use of nodes, Draper, Devarakonda, and Mairs teach the modification of data, and Bereznyi, Devarakonda, and Mairs teach the use of applications and the use of messages.

17. As per claims 16 and 64, the "...write-notification message is sent..." is taught by Bereznyi col. 31, lines 2-3 and col. 31, lines 12-14, the "...to the at least one interested node..." is taught by Draper at col. 1, lines 18-29,

the "...in response to the at least one interested node..." is taught by Draper at col. 7, lines 60-61 and col. 1, lines 18-29,
and the "...requesting that said data item be written to persistent storage..." is taught by Draper at col. 8, lines 46-49, col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, line 46-48.

18. Claims 15 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper, Bereznyi, Devarakonda, and Maris as applied to claims 14 and 62 above respectively, and further in view of Yohe et al. (U.S. Patent No. 6,012,085).

As per claims 15 and 63, the "...write-notification message is sent..." is taught by Bereznyi col. 31, lines 2-3 and col. 31, lines 12-14,
the "...to the at least one interested node..." is taught by Draper at col. 1, lines 18-29,
the "...made by said at least one interested node..." is taught by Draper at col. 1, lines 18-29,
but the "...in response to a lock request..." is not taught by either Draper, Bereznyi, Devarakonda, or Maris.

However, Yohe teaches responding to lock requests as follows:

"...The cache verifying computer includes means for recognizing a LOCK request from the remote client computer and for obtaining a lock on the data from the file server computer in response to the LOCK request..." at col. 3, lines 37-41.

It would have been obvious to one of ordinary skill at the time of the invention to combine Yohe with Draper, Bereznyi, Devarakonda, and Mairs to respond to lock requests in order provide for the control of access to parts of database by applications

running of remote terminals and thus provide for wider access to the database. Draper, Bereznyi, Devarakonda, Mairs, and Yohe teach related applications. They teach the use of computers, the use of networks, and the use of nodes, Draper, Bereznyi, Devarakonda, and Yohe teach the use of caches and the use of objects, Draper, Devarakonda, Mairs, and Yohe teach the modification of data, and Bereznyi, Devarakonda, Mairs, and Yohe teach the use of applications and the use of messages.

19. Claims 17 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper, Bereznyi, Devarakonda, and Maris as applied to claims 14 and 62 above respectively, and further in view of Srbijic et al. (U.S. Patent No. 5,933,849).

As per claims 17 and 65, the "...write-notification message is sent..." is taught by Bereznyi col. 31, lines 2-3 and col. 31, lines 12-14, the "...to the at least one interested node..." is taught by Draper at col. 1, lines 18-29, the "...that the master sends to the at least one interested node..." is taught by Draper at col. 8, lines 3-5, col. 8, lines 46-49, and col. 1, lines 18-29, the "...for the at least one interested node..." is taught by Draper at col. 1, lines 18-29, the "...to transfer another data item to another node..." is taught by Draper at col. 12, lines 20-22, col. 4, lines 1-3, and col. 4, lines 1-3, but the "...within a ping request..." is not taught by either Draper, Bereznyi, Devarakonda, or Maris.

However, Srbijic teaches the use of ping requests as follows:

"...On the other hand, if cache E fails to respond to a request for the object from cache A, then the cache E or the connection

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to cache E may be inoperative, and another cache on the directory list must be selected and sent a UDP ping request..." at col.

It would have been obvious to one of ordinary skill at the time of the invention to combine Srblic with Draper, Bereznyi, Devarakonda, and Mairs to respond to lock requests in order provide for the control of access to parts of database by applications running of remote terminals and thus provide for wider access to the database. Draper, Bereznyi, Devarakonda, Mairs, and Srblic teach related applications. They teach the use of computers, the use of networks, the use of nodes, Draper, Bereznyi, Devarakonda, and Srblic teach the use of caches and the use of objects, and Bereznyi, Devarakonda, Mairs, and Srblic teach and the use of messages. For claims 17 and 65 the term "move" is used to suggest the term "transfer".

20. Claims 11 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper and Bereznyi as applied to claims 10 and 48 above respectively, and further in view of Ranger (U.S. Patent No. 5,999,940).

As per claims 11 and 59, the "...step of sending a single message includes sending a message..." is taught by Bereznyi at col. 31, lines 2-3 and col. 31, lines 12-14,
the "...to request that all data items..." is taught by Draper at col. 8, lines 46-49 and col. 11, lines 23-25,
the "...be written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 56-58,
but the "...that identifies a bin..."

and the "...that belong to the bin...", are not taught by either Draper or Bereznyi.

However, Ranger teaches the use of bins as follows:

"...If the first `M` items are not all members of the same class, even if members of the same superclass, (step 706), then the classification criterion becomes "By Class" (step 726). In this case, class names of the different classes of the first `M` items are used as bin categories. If there are other, different classes among the items beyond the first `M` items, or if the number of classes exceed `R` (step 728), the system provides an "other" bin for these classes (step 730)..." at col. 20, lines 30-37.

It would have been obvious to one of ordinary skill at the time of the invention to combine Ranger with Draper and Bereznyi to provide bins in order to provide containers for different classes of objects. Draper, Bereznyi, and Ranger teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of queries, and the use of objects, Draper and Ranger teach the modification of data, and Bereznyi, and Ranger teach the use of applications and the use of messages.

21. Claims 19 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper and Bereznyi as applied to claims 18 and 66 above respectively, and further in view of Frank et al. (U.S. Patent No. 6,832,120).

As per claims 19 and 67, the "...if a version of said data item...", is taught by Bereznyi at col. 38, lines 5-8 and col. 21, lines 22-25, the "...that is at least as recent as said modified version...", is taught by Bereznyi at col. 38, lines 5-8,

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the "...has not already been written to persistent storage..." is taught by Draper at col. 5, lines 29-31, col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48, the "...then sending a write-perform message..." is taught by Bereznyi at col. 31, lines 2-14, the "...from said master..." is taught by Draper at col. 8, lines 27-29, the "...for said modified version..." is taught by Bereznyi at col. 38, lines 5-8, the "...to be written to persistent storage..." is taught by Draper at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 46-48, but the "...to grant permission..." is not taught by either Draper or Bereznyi.

However Frank teaches the granting of permission as follows:

"...Each of these user objects can be granted or denied permissions to any of the Security Permissions in each of the 8 Security Groups..." at col. 7, lines 15-17.

It would have been obvious to one of ordinary skill at the time of the invention to combine Frank with Draper and Bereznyi to grant permissions in order to allow different users or processes to either access to or modify parts of databases. Draper, Bereznyi, and Frank teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of queries, the use of nodes, and the use of objects, Draper and Frank teach the modification of data and the use of permissions, and Bereznyi, and Frank teach the use of applications and the use of messages.

Allowable Subject Matter

22. Claims 2-5, 12, 50-53, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner has not been able to identify any prior art that teaches the use of an ordered series of bins where the ordered series corresponds to time ranges.

Response to Arguments

23. Applicants' arguments filed 3 April 2006 have been fully considered but they are not persuasive. In the first argument for independent claim 1 on page 3, paragraph 5, page 4, paragraphs 1-4 and page 5, paragraph 1, the Applicants state:

"Thus, to establish a prima facie case of obviousness as a matter of law, the claimed limitations, as a whole, must be alleged to be taught or suggested by the prior art. Merely dissecting a claimed invention into discrete elements, and then evaluating the dissected elements in isolation fails to present a prime facie case of obviousness as a matter of law."

Applicant admits to being perplexed about how to respond to the inconsistency between (1) the evidence required to support an obviousness rejection, and (2) the evidence that has been repeatedly offered by the Office Actions relating to the present application. Specifically, to support an obviousness rejection, the Applicant would expect an argument that has the following form: (1) element X is shown in reference A, (2) element Y is shown in reference B, and (3) there is some actual suggestion to combine the references A and B to create the mechanism or technique that has both elements X and Y.

However, the Office Action does not support the obviousness rejections in that manner. Rather, to support the obviousness rejections, not only has each claim been divided into its constituent elements, but also each constituent element of the claim has been finely dissected into a set of short phrases and sentence fragments. The Office Action then points out how each individual fragment corresponds to a similar fragment in any one of a handful of references. The fragment-to-prior-art correlation appears to have been

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made without any consideration as to the relationship between the fragments, the meaning of the elements as a whole, and the meaning of the claim as a whole.

None of the nine cited references have been cited to disclose, teach, or suggest a single element of any of the independent claims. For example, with respect to Claim 1, none of the nine cited references have been cited to disclose, teach or suggest:

"modifying the data item in a first node of said multiple caches to create a modified data item"

OR

"sending the modified data item from said first node to a second node of said multiple caches without durably storing the modified data item from said first node to persistent storage"

OR

"after said modified data item has been sent from said first node to said second node, said first node sending a request to a master of said data item for writing said data item to persistent storage"

OR

"in response to said request, said master coordinating with said multiple caches to cause said data item to be written to persistent storage"

Instead, the Office Action dissects the claimed elements into discrete elements and then evaluates the dissected elements in isolation, rather than considering the elements as a whole. As an example of a evaluating a dissected element in isolation, Bereznyski is cited to show "without durably storing," but is not cited to show the subject matter, as a whole, of any element recited in Claim 1."

The Examiner disagrees. The rejection of independent claim 1 is in full compliance with the requirements of 35 U.S.C. 103(a). During the last Office Action the Examiner provided the Applicants with substitute art for independent claim 1. The obviousness rejection in this Office Action uses Draper and Bereznyski references, which address all the elements in the limitations of independent claim 1. The Applicants have chosen not to argue specifics in the new art, but have provided a generalized argument as stated

above. Draper teaches the first limitation. Draper teaches "modifying the data item in a first node of said multiple caches" at col. 7, lines 46-48, col. 4, lines 1-3, and col. 8, lines 11-14 and "to create a modified data item" at col. 6, lines 64-64 and col. 7, lines 1-3. A combination of Draper and Bereznyi teach the second limitation. Draper teaches "sending the modified data item from said first node to a second node of said multiple caches" at col. 9, lines 29-31, col. 7, lines 46-48, col. 4, lines 1-3, and col. 8, lines 11-14, "the modified data item from said first node" at col. 7, lines 46-48 and col. 4, lines 1-3 and "to persistent storage" at col. 4, lines 56-58 and Bereznyi teaches "to persistent storage" at col. 4, lines 56-58. Draper teaches the third limitation. Draper teaches "after said modified data item has been sent from said first node to said second node" at col. 7, lines 46-48, col. 9, lines 29-31, and col. 4, lines 1-3, "said first node sending a request" at col. 4, lines 1-3 and col. 8, lines 46-49, "to a master of said data item" at col. 8, lines 27-29 and col. 21, lines 22-25, and "for writing said data item to persistent storage" at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 56-58. Finally, Draper teaches the fourth limitation. Draper teaches "and in response to said request" at col. 7, lines 60-61, "said master coordinating with said multiple caches" at col. 13, lines 4-51, and "to cause said data item to be written to persistent storage" at col. 6, lines 64-67, col. 7, lines 1-3, and col. 4, lines 56-58. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed

invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It would have been obvious to one of ordinary skill at the time of the invention to combine Bereznyski with Draper to use caches for temporary storage in order to use standard hardware to avoid the need to download the data from a data source a second time and gain acceptance of the system.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (571)-272-4110. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Harold E. Dodds, Jr.
Patent Examiner
May 25, 2006



JETA ROBINSON
PRIMARY EXAMINER